

BOOK REVIEW

Learning and Behavior: A Contemporary Synthesis (2nd Edition)

By Mark E. Bouton

2015 Sinauer (464 pages)

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The new edition of Mark Bouton's textbook takes the approach of synthesizing aspects of cognitive psychology into a learning textbook to give the book a modern framework. He includes substantial integration of evolutionary framework and connectionist models of cognitive science into the topics of more traditional learning texts. While the addition of an evolutionary framework is much appreciated and helps give the bigger picture context of how different learning mechanisms came to be, the extensive discussion of cognitive psychology and connectionist approaches within the text feels out of place at times. The connections between fields seem productive, but the extent of the connectionist model seems excessive and often feels tangential to the learning topics at hand. Although the text is targeted to "undergraduates, graduates, and curious professionals" (Sinauer website), I believe it would be difficult to use this text in an undergraduate level course and that professionals are likely to find it inaccessible unless they are in academia. The book is extremely theory driven. Bouton does a nice job of providing varied examples in humans and animals, but the approach to learning is very much an academic rather than a practical one. A positive feature of the book is inclusion of examples that show how academics use learning theory to understand problems people face in life, but there is little explanation of how an individual person could take that information and apply it in their life.

Some of the practical applications of learning most critical for students to understand in walking away from a learning class are noticeably missing from this text. For example, there is no real discussion of the side-effects that are typical of the use of either extinction or punishment. In fact, punishment, despite its widespread use in society, is barely discussed at all. Also noticeably missing are discussions of observational learning and ethics. Bouton notes, "The behavioral study of learning in animals provides an important bridge between the neurosciences and psychology" (p. 27). This is an excellent point but then Bouton fails to cross that bridge and to adequately make those critical connections between neuroscience and psychology throughout the rest of the book with the connectionist modeling his only framework for discussing Learning and Neuroscience.

Each chapter of the text is densely packed and unusually organized. Bouton organizes the text to develop how learning researchers discover theories, test them, and then modify them; however this leads to some difficulties in

teaching a course using this text. In order to get information about extinction for example, a reader would have to read in three different chapters to find that information. Similarly, this means that topics occasionally pop-up in unusual places. Adjunctive behaviors appear in the middle of a chapter on avoidance learning. The range of topics covered in each chapter is huge. The first chapter, for example, covers a thorough history of the field of learning, information processing and connectionist approaches, an introduction to classical and operant conditioning, and discussions of arguments about S-O vs. R-O learning.

The general style of writing in the text is readable, but the inclusion of many different symbolic letters to represent stimuli used in past experiments and frequent equations makes the text less accessible to undergraduate students. Readers struggle to track what A and B represent in each experimental description. While the goal is to make the experiment generalizable to many situations, it is much easier on the reader to use the stimuli actually presented (tone or click or light) in the described experiment. Further, the text is not broken up much and includes long pages of nothing but text with only an occasional graph or connectionist model. Breaks in the text that test students understanding and help to delineate and review section topics would help the reader to get through the material. Bouton does include "What does it all mean?" sections to help the reader "see the forest for the trees." While these are helpful, they come too late. If the reader does not get that information early in the chapter, they are going to struggle to connect it with the information that they have already read. The book is certainly unique among learning textbooks and may be the perfect thing for an advanced level class in learning that hopes to include more aspects of cognitive psychology.

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